

SCHEDULE OF LOADS

CRKT NR	LOAD DESCRIPTION	NUMBER OF OUTLETS		SWITCHES				VOLTS	VOLT AMPERE	AMPERE	CB RATING	NUMBER & SIZE OF WIRE CONDUIT			
		CO/SPO	LIGHTING	S	S2	S3	S3W								
1	LIGHTING OUTLET		14		1			230	1400	6.09	15 AT	2-3.5MM SQ THHN/THWN & 1-2.0MM SQ THHN/THWN	IN EXPOSED 20MM DIA IMC		
2	LIGHTING OUTLET		14		1			230	1400	6.09	15 AT	2-3.5MM SQ THHN/THWN & 1-2.0MM SQ THHN/THWN	IN EXPOSED 20MM DIA IMC		
3	CEILING FAN OUTLET		10					230	1000	4.35	15 AT	2-3.5MM SQ THHN/THWN & 1-2.0MM SQ THHN/THWN	IN EXPOSED 20MM DIA IMC		
4	CEILING FAN OUTLET		10					230	1000	4.35	15 AT	2-3.5MM SQ THHN/THWN & 1-2.0MM SQ THHN/THWN	IN EXPOSED 20MM DIA IMC		
5	LIGHTING OUTLET		12		2			230	1200	5.22	15 AT	2-3.5MM SQ THHN/THWN & 1-2.0MM SQ THHN/THWN	IN EXPOSED 20MM DIA IMC		
6	LIGHTING OUTLET		12		2			230	1200	5.22	15 AT	2-3.5MM SQ THHN/THWN & 1-2.0MM SQ THHN/THWN	IN EXPOSED 20MM DIA IMC		
7	CONVENIENCE OUTLET	8						230	1440	6.26	20 AT	2-3.5MM SQ THHN/THWN & 1-2.0MM SQ THHN/THWN	IN EXPOSED 20MM DIA IMC		
8	CONVENIENCE OUTLET	10						230	1800	7.83	20 AT	2-3.5MM SQ THHN/THWN & 1-2.0MM SQ THHN/THWN	IN EXPOSED 20MM DIA IMC		
9	CONVENIENCE OUTLET	10						230	1620	7.04	20 AT	2-3.5MM SQ THHN/THWN & 1-2.0MM SQ THHN/THWN	IN EXPOSED 20MM DIA IMC		
10	CONVENIENCE OUTLET	8						230	1440	6.26	20 AT	2-3.5MM SQ THHN/THWN & 1-2.0MM SQ THHN/THWN	IN EMBEDDED 20MM DIA IMC		
11	CONVENIENCE OUTLET	8						230	1440	6.26	20 AT	2-3.5MM SQ THHN/THWN & 1-2.0MM SQ THHN/THWN	IN EMBEDDED 20MM DIA IMC		
12	SPLIT TYPE ACU 2.5 TR	1						230	4175	18.15	40 AT	2-5.5MM SQ THHN/THWN & 1-3.5MM SQ THHN/THWN	IN EXPOSED 20MM DIA IMC		
13	SPLIT TYPE ACU 3 TR	1						230	6440	28.00	40 AT	2-5.5MM SQ THHN/THWN & 1-3.5MM SQ THHN/THWN	IN EXPOSED 20MM DIA IMC		
14	SPLIT TYPE ACU 3 TR	1						230	6440	28.00	40 AT	2-5.5MM SQ THHN/THWN & 1-3.5MM SQ THHN/THWN	IN EXPOSED 20MM DIA IMC		
15	SPLIT TYPE ACU 3 TR	1						230	6440	28.00	40 AT	2-5.5MM SQ THHN/THWN & 1-3.5MM SQ THHN/THWN	IN EXPOSED 20MM DIA IMC		
16	SPLIT TYPE ACU 3 TR	1						230	6440	28.00	40 AT	2-5.5MM SQ THHN/THWN & 1-3.5MM SQ THHN/THWN	IN EXPOSED 20MM DIA IMC		
17	SPLIT TYPE ACU 2.5 TR	1						230	4175	18.15	40 AT	2-5.5MM SQ THHN/THWN & 1-3.5MM SQ THHN/THWN	IN EXPOSED 20MM DIA IMC		
18	SPARE							230	1600	6.96					
19	SPARE							230	1600	6.96					
20	SPARE	42/6	72		6			230	1600	6.96					
TOTAL									54030	234.95					

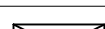

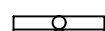
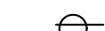


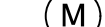



$$I_w = (I_t \times DF) + 25\% \text{ LARGEST MOTOR} = 194.96 \text{ Amps}$$

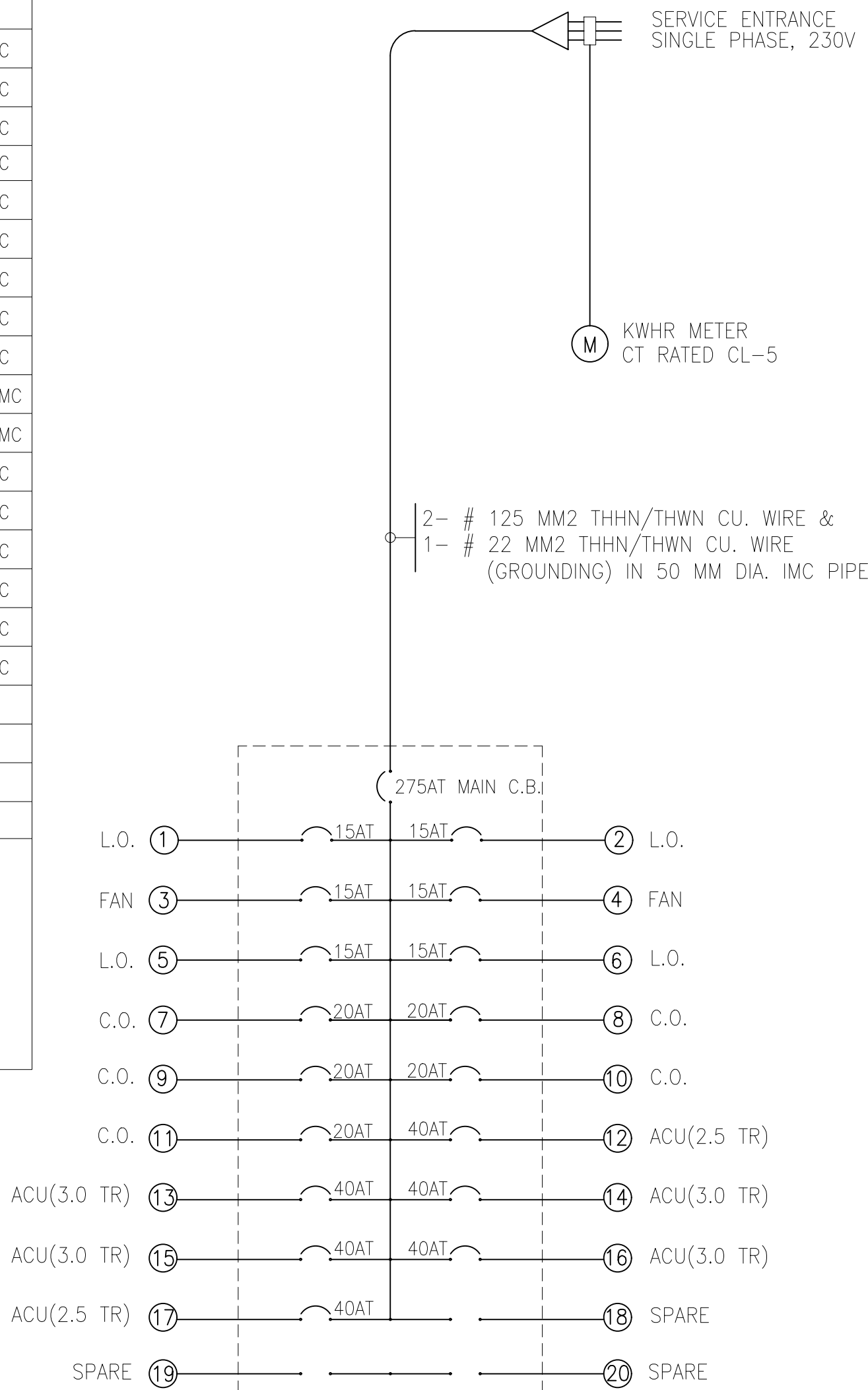
$$I_{cb} = I_w + 250\% \text{ LARGEST MOTOR} = 264.96 \text{ Amps}$$

USE: 2 - 125MM SQ THWN CU WIRE AND 1 - 22.0MM SQ THWN GROUNDING
IN 40MM DIA IMC

275 AT MAIN, 240V,2P,60 Hz, 20 BRANCHES
CENTER MAIN PANEL BOARD, BOLT ON

LEGEND

	2X32W FLOURESCENT LAMPS W/ 2'X4' LAY-IN DIFFUSER		CEILING FAN
	2X32W FLOURESCENT LAMPS W/ SURFACE MOUNT DIFFUSER		DUPLEX CONV. OUTLET
	WALL EXHAUST FAN OUTLET		AIR CON DISCONNECT/BREAKER SWITCH with NEMA 3R ENCLOSURES
S_a	ONE GANG SWITCH		KILOWATT-HOUR METER
S_{ab}	TWO GANG SWITCH		CIRCUIT HOMERUN, IND. CKT. NO.
S_{abc}	THREE GANG SWITCH		SERVICE ENTRANCE SINGLE PHASE 230VAC & 60HZ
S_{cf}	CEILING FAN SWITCH/CONTROL		POWER PANEL BOARD



SINGLE-LINE RISER DIAGRAM

GENERAL NOTES & SPECIFICATIONS

1.	ALL ELECTRICAL WORK SHALL CONFORM TO THE LATEST EDITION THE PHILIPPINE ELECTRICAL CODE, TO THE RULES AND REGULATIONS OF LOCAL AND NATIONAL AUTHORITIES CONCERNED AND THE REQUIREMENTS OF LOCAL UTILITY COMPANIES.
2.	<p>WIRING METHOD SHALL BE AS FOLLOWS:</p> <p>a. MAIN SERVICE ENTRANCE ----- THWN THRU EXPOSED IMC & OPEN OVERHEAD</p> <p>b. RACEWAYS FOR POWER ----- THHN/THWN NO. 12AWG THRU EXPOSED IMC (AFTER PANELBOARD)</p> <p>c. AUXILIARY SYSTEM ----- THHN/THWN NO.12AWG THRU EXPOSED IMC (AFTER PANELBOARD)</p> <p>d. RACEWAYS FOR LIGHTING ----- THHN/THWN NO.12AWG THRU EXPOSED IMC (AFTER PANELBOARD)</p>
3.	MINIMUM SIZE OF WIRE SHALL BE 3.5mm ² THHN/THWN AND 15MM(1/2") NOMINAL DIAMETER RESPECTIVELY UNLESS OTHERWISE SPECIFIED ON PLANS.
4.	NO BRANCH CIRCUIT SWITCHING IN LIGHTING AND POWER SHALL HAVE A LOAD MORE THAN 80% OF ITS RATING.
5.	LIGHT CONTROL SWITCHES SHALL BE RATED 20 AMPERES, 230V.
6.	UNLESS OTHERWISE SPECIFIED PULLBOXES OR JUNCTION BOXES SHALL BE PROVIDED WHENEVER REQUIRED AND NECESSARY, ALTHOUGH SUCH BOXES ARE NOT INDICATED ON PLANS.
7.	FOR EACH SPARE CIRCUIT PANELBOARD, PROVIDE AN EMPTY CONDUIT 15MM(1/2") DIA. TERMINATING TO A COVERED SQUARE BOX.
8.	ALL MATERIALS AND EQUIPMENT TO BE USED SHALL BE BRAND NEW AND OF APPROVED TYPE FOR BOTH LOCATION AND PURPOSES.
9.	ALL METAL FRAMES SHALL BE PROPERLY AND ADEQUATELY GROUNDED. GROUND WIRE SHALL BE PROVIDED ON ALL EQUIPMENT FEEDER.
10.	<p>MOUNTING HEIGHTS SHALL BE AS FOLLOWS:</p> <p>a. LIGHT SWITCHES ----- 1.40m FINISH FLOOR LINE (F.F.L.)</p> <p>b. RECEPTACLES ----- 0.30m F.F.L.</p> <p>c. TELEPHONE/INTERCOM OUTLETS ----- 0.30m F.F.L.</p> <p>d. PANELBOARDS ----- 1.80m F.F.L.</p> <p>e. COUNTER TOP OUTLET ----- 1.10m F.F.L.</p>
11.	THERE SHALL BE ONLY ONE SERVICE DROP SECONDARY TO THE PROPOSED BUILDING.
12.	SECONDARY SERVICE SHALL BE 230volts, SINGLE PHASE, 60Hz, FOR POWER & LIGHTING ALL 20-AMPERES CIRCUIT HOMERUN TO PANELBOARD MORE THAN 30 METERS IN LENGTH SHALL BE 5.5mm ² THHN (#10AWG), UNLESS OTHERWISE SPECIFIED ON PLANS.
13.	<p>ADDITIONAL MATERIALS SPECIFICATIONS:</p> <p>a. INTERMEDIATE METALLIC CONDUIT (IMC) PIPE -- NICHE OR APPROVED EQUIVALENT</p> <p>b. WIRES AND CABLES ----- AMERICAN WIRES & CABLES OR APPROVED EQUIVALENT</p> <p>c. CIRCUIT BREAKER (BOLT-ON TYPE) ----- BOLT-ON FOR MAIN BREAKER AND BOLT-ON FOR ALL PANELBOARDS OR APPROVED EQUIVALENT</p> <p>d. WIRING DEVICES ----- AMERICAN STANDARD DEVICES OR APPROVED EQUIVALENT</p> <p>e. JUNCTION/PULLBOXES (GAUGE 16) ----- FUMACO OR FABRICATED ON SITE --ZINC CHROMATE FINISH</p>
14.	ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR THE PROPER IDENTIFICATION AND LABELING OF ALL CIRCUIT BREAKER. EACH PANEL WILL BE PROVIDED WITH A TYPEWRITTEN CIRCUIT DIRECTORY.
15.	THE JOB SHALL BE EXECUTED IN THE MOST THOROUGH PROMPT AND WORKMAN LIKE MANNER, EMPLOYING STANDARD TOOLS, EQUIPMENT, METHODS AND GOOD ENGINEERING PRACTICES. THE JOB SHALL BE DONE COMPLETE IN ALL ASPECTS AS REQUIRED IN PLANS AND SPECIFICATION AND READY FOR OPERATION.
16.	THE DRAWING AND SPECIFICATIONS ARE INTENDED TO PRESENT A GENERAL LAYOUT AND BROAD OUTLINE AND DESCRIPTION OF THE PROJECT AND NOT NECESSARY INDICATE, DESCRIBED ACTUAL LOCATION LEVELS AND DISTANCES OF EQUIPMENT. THE CONTRACTOR IS HEREBY REQUIRED TO MAKE ADJUSTMENT AT THE JOBSITE AS LOCATIONS, LEVELS AND DISTANCES ARE GOVERNED BY ACTUAL FIELD CONDITIONS.
17.	<p>WIRES SHALL BE COLOR CODED:</p> <p>LINE 1 ----- RED/BLUE COMMON ----- WHITE</p> <p>LINE 2 ----- YELLOW GROUND ----- GREEN</p>
18.	NO REVISION IN THE DESIGN SHALL BE DONE WITHOUT THE PRIOR KNOWLEDGE AND APPROVAL OF THE DESIGNER AND THE OWNER. ANY SUCH REVISION DONE WITHOUT THE APPROVAL SHALL CAUSE RESPONSIBILITY OF THE DESIGNER TO CEASE AS A WHOLE.
19.	ALL EQUIPMENT WIRE, ROYAL CORDS, SPECIAL TYPE PLUGS AND RECEPTACLE AS REQUIRED SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR.
20.	ALL ELECTRICAL WORKS SHALL BE DONE UNDER THE DIRECT SUPERVISION OF A DULY LICENSED ELECTRICAL ENGINEER AND / OR MASTER ELECTRICIAN.

PROJECT TITLE :	PREPARED BY:	CHECKED BY:	SUBMITTED BY:	RECOMMEND APPROVAL:	APPROVED BY:	SHEET NO.
PROPOSED PNP SAF CLASSROOMS						E-1
LOCATION: FORT STO DOMINGO, STA ROSA, LAGUNA	ENGR FRENEL B BAUTISTA PCINSP CHIEF, PLANS & DESIGN SECTION	ARCH PAVEL D HALOG PSUPT CHIEF, CONSTRUCTION & REPAIR DIVISION	JOEL FELIX MATEO D RUNES IV, MPA PSSUPT CDS, ENGINEERING SERVICE (CE) DSC	JEROME P PAGARAGAN, CEO VI PSSUPT DEPUTY DIRECTOR, ENGINEERING SERVICE	CRISTINO C CAMPANILLA, CESE PCSUPT DIRECTOR, ENGINEERING SERVICE	JUNE 22, 2012 <small>DATE DRAWING COMPLETED</small>